

a 224229

TWO NEW TAXA OF *PTILOTUS* (AMARANTHACEAE)

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Abstract

Two new taxa of *Ptilotus* are described, *Ptilotus maconochiei* Benl sp. nov. from Queensland and *Ptilotus aristatus* var. *stenophyllus* Benl var. nov. from the Northern Territory.

Descriptions

***Ptilotus maconochiei* Benl, sp. nov.**, *Pt. royceano* Benl affinis, a quo praecipue recedit habitu erecto, ramis nec arcuatis nec dependentibus, foliis carnosius maioribus haud orbicularibus, spicis confertifloris conoideis dein elongati-ovoideis, haud laxifloris.

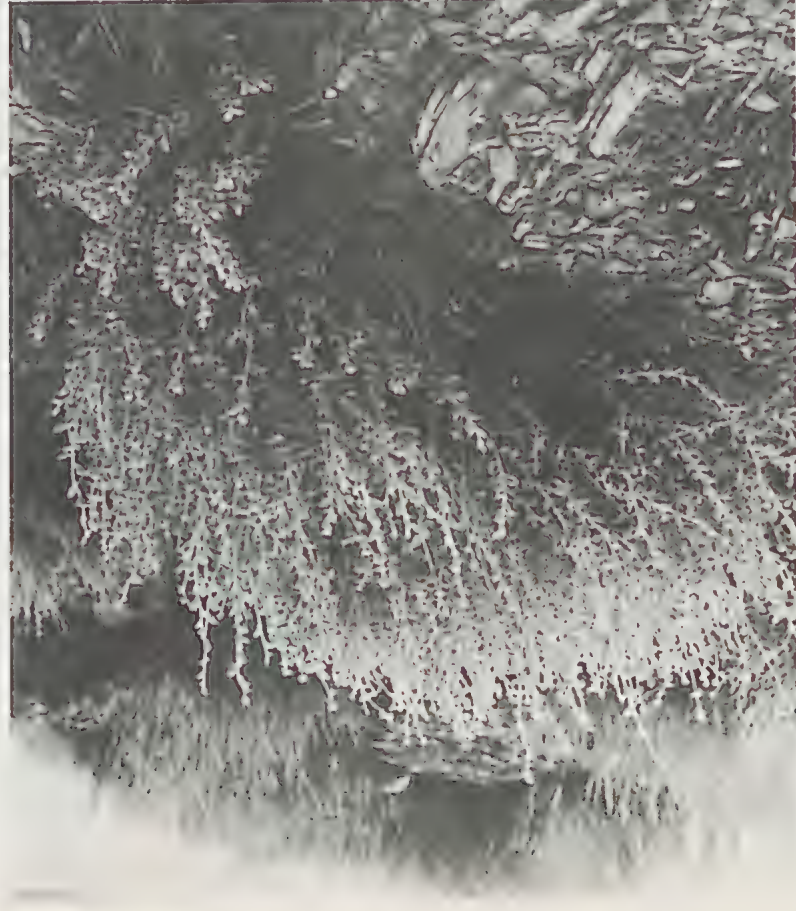
Typus: Queensland; Mt. Isa, City Lookout, ca 570 m alt.; coll. *Benl* (Au 64) & *Maconochie*, 8.iii.1978 (holotypus M; isotypi AD, ADW, B, BM, BRI, CANB, DNA, K, M, MEL, NSW, NT, NY, P, PERTH).

Tufted *shrub* (Fig. 1, a) to 80 cm tall and 80 cm or more across, with homogenous tomentose indumentum on stems and leaves. The tomentose vestiture of vegetative parts composed of fine white, crisped, densely intricate hairs, ca 1 mm long, slightly articulate and twisted, less dense on fully developed leaves than on shoots, the former showing prominent venation underneath; the many erect *stems* (to 1 cm diameter at their grey to light-brown base) arising from a stout woody rootstock; numerous divergent branches and branchlets 10-30 cm long, clothed with soft white indumentum when young, bearing leaves all along and with spikes both terminal and axillary, towards the apex (Fig. 1, b). *Leaves* alternate, 0.4-2.5 (-4) cm distant, erect-spreading, spathulate-obovate or broadly elliptical, thick, fleshy, whitish to dark grey or greyish-green becoming brownish when withering, persistently puberulent on both sides; blade entire, 0.8-2 (-2.5) x 1-1.5 (-1.8) cm. apex blunt-pubescent mostly covering a minute excurrent mucro, slightly attenuate at base into a short, white, woolly petiole to 5 mm long. Uppermost leaflets grading into bracts.

Flower spikes compact (Fig. 1, b), borne terminally on branches and branchlets as well as in the upper (in part defoliate) leaf axils, subsessile or shortly pedicellate, pedicels 1-3 mm long, conoid to elongate-ovoid, 0.7-1.2 x 0.8-1.1 cm, rarely cylindrical and to 3 cm long, with 15 to 30 shortly stalked, fluffy flowers, tightly arranged; dull pink when fresh, soon losing their colour and becoming inconspicuous. Floral bract and bracteoles subacute, faintly keeled with a light-brown prominent midrib, on the dorsal side the surface almost obscured by the dense pubescence and the woolly flexuose hairs of the rachis. Bract (Fig. 2, a) broadly ovate, 2-2.5 x 1.5 mm, clothed with and exceeded (at top as well as on the irregularly denticulate margins) by more or less straight to more or less curved or crisped remotely nodose hairs to 2 mm long. Bracteoles smaller, ca 1.8 x 1.3 mm, subovate-concave, membranaceous, adpressed to perianth, less hairy and transparent on both edges (Fig. 2, b). *Perianth* purplish turning pink, green in lower portion; surrounded at base by a dense ring of short rigid hairs; outer surface plumose except near the apex; the hairs spreading to 1.2 mm long. Perianth segments free, their thickened base forming a pseudotube 0.4-0.5 mm long, somewhat keeled by midrib; inner side (Fig. 2, c) with three conspicuous nerves, the outer of which more or less bordering a reddish, turning green, median areola. Outer perianth segments sublinear, about 4.5-5 mm long, to 1 mm across, the apex finely denticulate, margins often abruptly curved inward 0.25-0.35 mm below tip, the tip made appendage-like (Fig. 2, c); glabrous within. Inner segments ca 4.5 x 0.8 mm, lanceolate, usually tapering gradually into apex which may be reached but not exceeded by dorsal vestiture; often showing near the base some internal crisped hairs arising mostly from the edges. *Stamens* 5, all fertile; united to a 3.5-4.5 mm high membranous, glabrous cup, only basally attached to



b.



a.

Fig. 1. *Pilolus macnochiei* Bent: a, shaly slopes of Mt Isa City Lookout (ca 570 m alt.) covered with more than one hundred shrubs (40-80 cm tall) of the hitherto undescribed species; photo A.S. George; b, branches and branchlets bearing compact spikes up to 3 cm long; photo J.R. Maconochie.

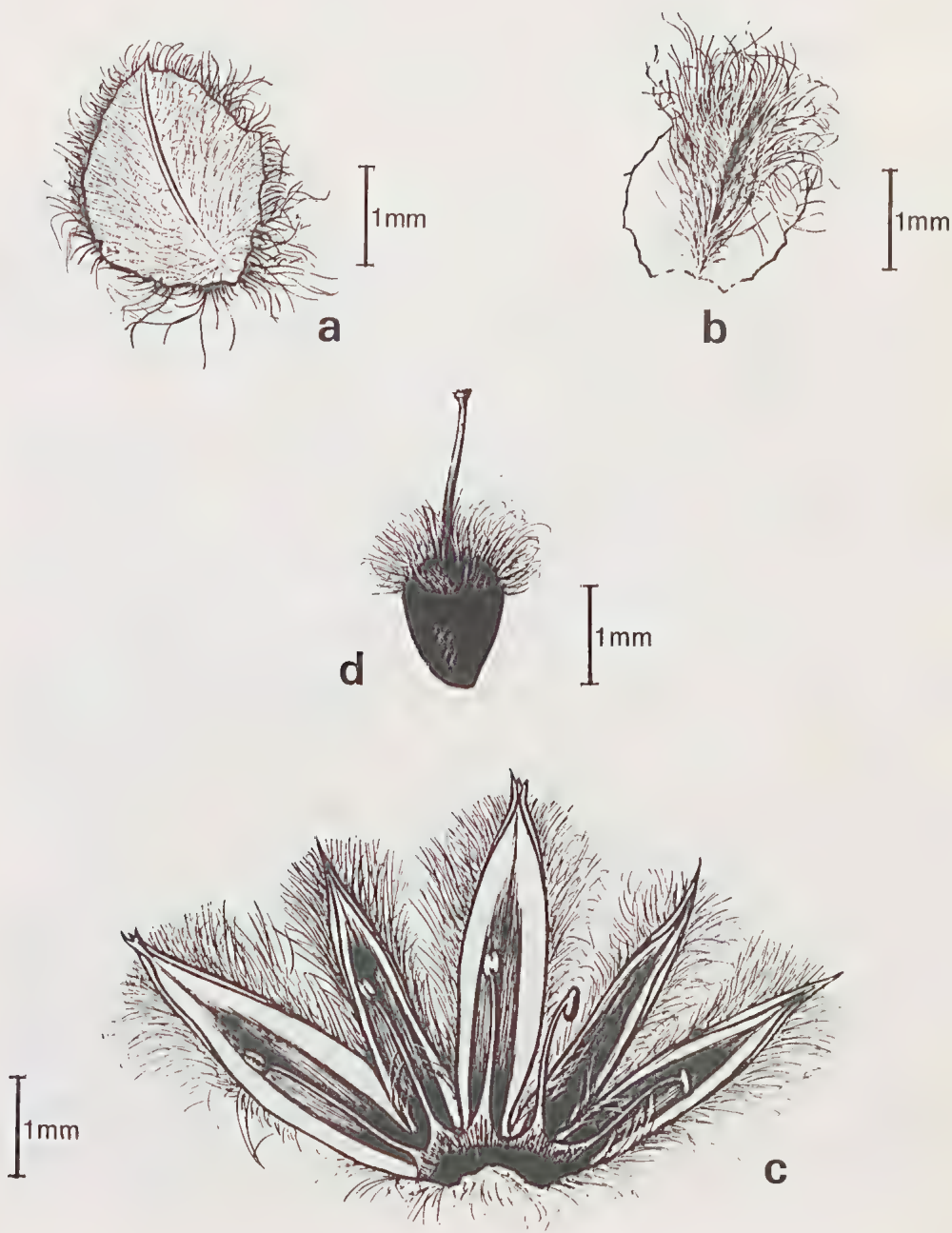


Fig. 2. *Ptilotus maconochiei* Benl: a, bract, inner view; b, bracteole, outer view; c, perianth cut open, inner view; d, pistil (drawn by A. Böhm).

the perianth segments; pseudo-staminodes absent. Filaments narrowly ligulate, almost equally long from 2 to 2.5 mm, subulate above, dilated to 0.3-0.45 mm below; anthers ellipsoid, ca 0.35 x 0.2 mm. *Ovary* turbinate, finally sub-globose, 1.2-1.5 mm diameter, sessile, remarkably pilose in upper portion, hairs at first straight then woolly; style central, 1.8-2 mm long, glabrous except for its base; stigma inconspicuous.

Specimens Examined

QUEENSLAND: Burke District, Mt Isa city, main lookout (20°44'S, 139°30'E): *Bishop s.n.*, hillside, shale and rocky soil, 2.viii.1969 (BRI); l.c., *Mason s.n.*, 1975 (BRI); — both specimens are represented by small fragments and erroneously determined as *P. royceanus* Benl; *George 12908* l.c., on rocky hillside, 9.iv.1975 (M. PERTH).

Discussion

There is a considerable likeness of the present plant to *Ptilotus royceanus* as regards floral structure, but not with regard to the inflorescence, which in *P. royceanus* is an elongated, interrupted spike. The latter species is known from some ranges in the Australian desert, near the Western Australian-Northern Territory border, where it seems to be dependent on vertical rock walls with fissures and crevices.

An appendage-like extremity of the outer perianth segments may also be found in *P. mollis* Benl (see J.R.Soc.W.Aust.53: 5, Fig. 3, d), a species with crowded spikes like those of our new plant, but characterized among other things by a markedly different silky pubescence of the leaves giving them a peculiar silvery-grey cast.

Thus, whilst *P. royceanus* remains unique with its hanging branches, usually orbicular leaves and its loose-flowered inflorescences, *Ptilotus maconochiei* is sharply separated from other xerophytic taxa with a densely tomentose coat.

This species is named in honour of Mr John R. Maconochie, Senior Botanist in the Herbarium of Northern Territory, Arid Zone Research Institute, Alice Springs. Mr Maconochie and I had the opportunity to look for and collect this interesting *Ptilotus* at Mt Isa, where it seems to be endemic.

Stimulated by a conversation with Mr George and by the scanty material in the Queensland Herbarium we made a collecting trip to Mt Isa and there counted more than one hundred shrubs of the new taxon growing in full flower on the shale hillslope of the City Lookout, between 550 and 570 m altitude.

***Ptilotus aristatus* Benl, var. *stenophyllus* Benl, var. nov.**, differt a varietate typica foliis laete viridibus, lanceolatis, omnibus valde angustioribus.

Typus varietatis: Northern Territory; Mt Hay, Milton Park. "Mitchell grass plains in the SW. foothills. Moderately common. Erect, flowers purple." — *Griffin s.n.*, 23.x.1974 (holotypus CANB, isotypus NT).

Leaves uniformly green, the basal ones ca 5 mm broad, lower and medium cauline leaves 1.3-3 mm broad. In var. *aristatus* the glaucescent leaves (which may be reddish-tinged like the stem) are to 18 mm (basal) and 10 mm (cauline) broad respectively.

The holotype displays 20 bright green stems, densely tufted and to 25 cm long. Radical leaves are long-petioled, to 3.7 cm, the cauline ones more or less acicular. Flower-colour is deeper than in the specimens hitherto known of var. *aristatus*.